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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,278	11/08/2000	Robert Aigner	GR 98 P 1686	9981

7590 01/03/2003

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[REDACTED] EXAMINER

BUDD, MARK OSBORNE

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2834

DATE MAILED: 01/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	708 378	Applicant(s)	Aigner
Examiner	M. Budd	Group Art Unit	2834

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- Responsive to communication(s) filed on 11-20-02
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- Claim(s) 1-7 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- Claim(s) \_\_\_\_\_ is/are allowed.
- Claim(s) 1-7 is/are rejected.
- Claim(s) \_\_\_\_\_ is/are objected to.
- Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

### Application Papers

- The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.
- The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119 (a)-(d)

- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

All  Some\*  None of the:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

### Attachment(s)

- Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_  Interview Summary, PTO-413
- Notice of Reference(s) Cited, PTO-892  Notice of Informal Patent Application, PTO-152
- Notice of Draftsperson's Patent Drawing Review, PTO-948  Other \_\_\_\_\_

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Claims 1-7 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims are vague and indefinite in that it is unclear what actual structure is defined by the term "etching structures". It is noted that the term is used in the original disclosure, but no explanation or description is given. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 as (understood) rejected under 35 U.S.C. 102(a) as being clearly anticipated by

Bottom or Zimnicki.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-7 (as understood) rejected under 35 U.S.C. 103(a) as being unpatentable over

Bottom or Zimnicki in view of Von Dach, Fujita or Arvanitis.

Bottom and Zimnicki teach the piezo resonator with a layer reduced by etching to tune the resonant frequency. They do not teach removal of material to form "holes" and relate to single

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devices. Each of Von Dash, Fujita and Arvanitis teach tuning can be done by removal of "spots" rather than an entire layer; to apply this known method to Bottom or Zimnicki to achieve tuning e.g. coarse vs fine with etching would have been obvious to one of ordinary skill in the art. Providing duplicate parts has long been held to be within the skill expected of the routineer. Thus to provide multiple resonators would have been obvious to one of ordinary skill in the art.

Regarding applicants remarks, it appears that "etching structures" are nothing more than the structure remaining after something has been etched. Is this applicants definition? Until one specific definition is provided it is not possible to determine to the metes and bounds of the claims. What precisely defines an "etching structure" and how is it structurally different from surface reduced by e.g. polishing grinding or abrading? In short, in the finished product, how could one distinguish an "etching structure" from a "non-etching structure"?

As far as one can tell, the oxidized outer layer of Bottom is (in the finished product) structurally identical to the claimed "etching structures". Further, since the first electrode layer was etched, its surface would have an "etching structure" regardless of applicants definition, and consequently any layer placed over the etched surface would also take on an "etching structure" by virtue of its direct contact with the etched surface.

It appears that applicant argues that while the prior art admittedly etches a single layer electrode to adjust frequency that it is unobvious to apply this process to any further frequency adjusting layers. The examiner disagrees.

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**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

M BUDD/pj

12/31/02



MARK J. BUDD  
PRIMARY EXAMINER  
ART UNIT 212